APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,323	03/06/2002	Steven M. Zink	02SW049	9035

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EXAMINER
TRUONG, LAN DAI T

ART UNIT	PAPER NUMBER
2152	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
	10/092,323	ZINK ET AL.
Office Action Summary	Examiner	Art Unit	
	Lan-Dai Thi Truong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 November 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-22 and 24-39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-22 and 24-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 March 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____ .
3)☐ Information Disclosure Statement(s) (PTO/SB/08)   5)☐ Notice of Informal Patent Application
    Paper No(s)/Mail Date _____ .   6)☐ Other: _____ .

DETAILED ACTION

1. In view of the Appeal Brief filed on 11/02/2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(a) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(b) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. This action is response to communications: application, filed 03/06/2002; amendment filed 11/02/2006. Claims 1-7, 9-22, 24-39 are pending

Response to Arguments

3. Applicant's arguments filed 11/02/2006 have been fully considered; Applicant's arguments to claims 1 and 33 with respect to the references fail to disclose defining and

installing the primary aggregation component by an entity remote from the controller are

persuasive. Also Applicant's arguments to claims 21, 31 and 32 with respect to the references do

not describe steps of requesting tag information from a controller are persuasive. The previous

rejection is withdrawn

Drawing Objections

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims. Therefore, In claims 1 and 33, the claimed

features "...adds at least one secondary aggregation component based upon at least one of

increased data demands and network protocol consideration...", (see: page 2, lines 11-13; page

7, lines 8-10), must be shown or the feature(s) canceled from the claim(s). No new matter

should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Claim rejections-35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. The invention claims fail to interrelate essential elements of invention

as claimed e.g. the primary aggregation component, the industrial controller, the remote entity

and the communication component

Claim rejections-35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or descry
> bed as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the
> prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a
> person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by
> the manner in which the invention was made.

Claims 1-4, 9, 11, 18-20, 33-39 are rejected under 35 U.S.C 103(a) as being un-patentable over Blankenship et al. (U.S. 6,624,388) in view of Crater et al. (U.S. 6,201,996) in view of and further in view of Heidhues (U.S, 6,032,203)

Regarding to claim 1:

Blankenship discloses the invention substantially as claimed, including a system, which can be implemented in a computer hardware or software code for industrial controller comprising:

Defining and installing the primary aggregation component by an entity remote from the controller; a primary aggregation component associated with an industrial controller: (Blankenship discloses communications remotely between a remote system used by engineers/designers and a plurality of "welding systems" which shares functionality with "remote entity"; therefrom the engineers/designers can monitor/ configure/control the operations of the welding systems by using configuration component which controls aspect of "the welding systems" those are equivalent to "industrial controllers" such as upgrading modifying "procedures /and or programs;" wherein the software/ or component could be a software component which integrates plurality of objects/ classes/ instructions/ data structures, consequently, Examiner interprets the procedures/ and or program shares functionality with "primary aggregation components" as claimed: column 7, lines 1-67; column 8, lines 40-45; column 5, lines 14-67; column 6, lines 1-41, 50-67)

However, Blankenship does not explicitly disclose steps of aggregating one or more selected data items into an aggregated subset of data items; a communications component that transmits the subset of data items via a singular communications packet across a network

In analogous art, Crater discloses a industrial controller is capable to define "control structure" which is equivalent to "primary aggregation component" for remote computer wherein the control structure may be organized by object items each associated with a control function; wherein the control function further includes "one or more procedures for performing an action" those are equivalent to "selected data items into an aggregated subset of data items" as claimed. Crater also discloses method for using IP network/ Internet to support communications between the industrial controller and the remote computer such as monitoring/ controlling/ and supervising operations: abstract; column 2, lines 44-55; column 5, lines 52-67)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Crater's ideas of aggregating one or more procedures into control structure with Blankenship's system in order to provide an efficient industrial controller system which can support for larger service range, see (Crater: column 2, lines 44-55)

However, Blankenship- Crater does not explicitly disclose method of adds at least one secondary aggregation component based upon at least one of increased data demands and network protocol considerations

In analogous art, Heidhues discloses communications between "a PLC" which shares functionality with "aggregation component" and a plurality of controllers. The PCL is capable to translate telegrams into different protocols those are compatible for communications with the controllers: (abstract)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Heidhues's ideas of translating a telegram into different protocols for supporting communications between the PCL with plurality of controllers with

Blankenship- Crater's system in order to provide an efficient, dynamic and open network

interface which supports for interchangeable sets for communications and interface modules, see

(Heidhues: column 1, lines 10-14; column 2, lines 45-49)

Regarding to claims 11 and 33-36:

This claim is rejected under rationale of claim 1

Regarding to claim 2:

In addition to rejection in claim 1, Blankenship – Crater- Heidhues further discloses

client application: (Carter discloses "web browser application" which is equivalent to "client

application: column 4, lines 6-18)

Regarding to claims 3 and 38:

In addition to rejection in claims 2 and 37, Blankenship – Crater- Heidhues further

discloses Human and Machine Interface: (Blankenship disclose browser used for interacting

between designers/engineers and the industrial controller: column 7, lines 1-67; column 8, lines

40-45; column 5, lines 14-67; column 6, lines 1-41, 50-67)

Regarding to claim 4:

In addition to rejection in claim 2, Blankenship – Crater- Heidhues further discloses a

communication server: (Crater discloses remote computer" which shares functionality with

"communication server: abstract)

Regarding to claims 9, 18-20:

Those claims are rejected under rationale of claim 1 in light of Heidhues

Regarding to claims 37 and 39:

Those claims are rejected under rationale of claim 33

Claim 10 is rejected under 35 U.S.C 103(a) as being un-patentable over Blankenship -Crater- Heidhues in view of Su et al. (U.S. 6,625,161)

Regarding to claim 10:

Blankenship – Crater- Heidhues discloses the invention substantially as disclosed in claim 1, but does not explicitly disclose at least one of dynamically increasing and decreasing the amount of selected data items in the primary aggregating component based upon data demands received from the network;

In analogous art, Su discloses method of assignment and reassignment of traffic aggregates to the queues is changed dynamically, see (abstract, lines 1-12; column 2, lines 31-67; column 3, lines 47-67).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Su's ideas of dynamically assignment and reassignment of traffic aggregates to the queues with Blankenship – Crater- Heidhues's system in order to provide efficiency aggregation component

Claims 21-22, 24 and 27-32 are rejected under 35 U.S.C 103(a) as being un- patentable over Crater et al. (U.S. 6,201,996) in view of Bhatt et al. (U.S. 6,097,399) and further in view of Wang et al. (U.S. 6,970,921)

Regarding to claims 21:

Crater discloses the invention substantially as claimed, including a method, which can be implemented in a computer hardware or software code for industrial controller comprising:

Building an object from the tag information provided by the controller; installing the object on the controller: (Crater discloses a industrial controller capable of interacting with

remotely located computer; wherein the industrial controller builds a control function/ objects includes one or more procedures for performing an action associated with the control function: abstract; column 2, lines 21-40; column 3, lines 9-26; column 4, lines 45-65; column 16, lines 38-67)

Receiving data from the object that has been updated by the controller: (Crater also discloses method of updating objects: column11, lines 62-67; column 12, lines 1-12)

However, Crater does not explicitly disclose step of requesting tag information from a controller

In analogous art, Bhatt discloses aggregating device receives plurality of selected data in order to produce an aggregated data: (column 5, lines 11-14; column 6, lines 1-17)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bhatt's ideas of producing an aggregated data from received selecting data items with Crater's system in order to speed up transmitting time, see (Bhatt: column 4, lines 45-55)

However, Crater- Bhatt does not explicitly teach adding the data items arranged according to at least one of contiguous and non-contiguous address memory locations

Wang discloses method of arranged data packets in contiguous and non-contiguous space in memory: (abstract, lines 1-20)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Wang's ideas of storing transmitting data in contiguous and non-contiguous buffers with Crater- Bhatt's system in order to be able to statically or dynamically allocated memory, see (Wang: abstract, lines 15-20)

Regarding to claim 31:

This claim is rejected under rationale of claim 21. Examiner interprets the "constructing an optimized data packet" which is equivalent to "building an object" of claim 21; "refreshing the optimized data packet" is equivalent to "updating object data" of claim 21

Regarding to claim 32:

This claim is rejected under rationale of claims 1 and 21

Regarding to claims 22, 24, 27-30:

Those claims are rejected under rationale of claim 21

Claim 5-7, 12-13 and 14-17 are rejected under 35 U.S.C 103(a) as being un-patentable over Blankenship-Crater- Heidhues in view of Bhatt et al. (U.S. 6,097,399)

Regarding to claims 5 and 16:

Blankenship-Crater- Heidhues discloses the invention substantially as disclosed in claim 1, but does not explicitly teach sending request to the industrial controller relating to the subset of data items

In analogous art, Bhatt discloses aggregating device receives plurality of selected data in order to produce an aggregated data: (column 5, lines 11-14; column 6, lines 1-17)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bhatt's ideas of producing an aggregated data from received selecting data items with Blankenship-Crater- Heidhues's system in order to speed up transmitting time, see (Bhatt: column 4, lines 45-55)

Regarding to claims 6, 7:

Those claims are rejected under rationale of claim 1

Regarding to claim 13:

Blankenship-Crater- Heidhues discloses the invention substantially as disclosed in claim

11, but does not explicitly teach setting for at least one of object update times, event triggers,

whether to update the object based on rate, demand and other criteria, wherein a data stream

triggers are located, whether to continue on an over flow, number of driers currently installed,

timestamp information, size of buffers, start times, and object lifetime settings, see (Bhatt

discloses intervals of aggregating data items to produce an aggregated data: column 5, lines 11-

14; column 6, lines 1-17)

Regarding to claims 12, 15 and 17:

Those claims are rejected under rationale of claim 13

Regarding to claim 14:

Blankenship-Crater- Heidhues discloses a method as discuss in claim 11, but does not

explicitly disclose the services include at least one of Get All Attributes, Get All List, Set

Attributes List, Reset, Start, Stop, Create Object, and Delete Object

In analogous art, Bhatt discloses user selection options: (figure 5, items 21-30)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to combine Bhatt's ideas of providing user selection options with

Blankenship-Crater- Heidhues's system in order to conveniences for users

Claims 25-26 are rejected under 35 U.S.C 103(a) as being un-patentable over

Crater-Bhatt-Wang in view of Heidhues et al. (U.S. 2002/0191250)

Regarding to claims 25-26:

Crater-Bhatt-Wang a method as discuss in claim 21, but does not explicitly removing the object from the controller when a client no longer requests data items of interest; removing the object based upon at least one of an event and network connections being disrupted for a time period that is greater than a predetermined amount of time that is configured at the controller

In analogous art, Heidhues discloses communications between "a PLC" which shares functionality with "aggregation component" and a plurality of controllers. The PCL is capable to translate telegrams into different protocols those are compatible for communication with the controllers: (abstract)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Heidhues's ideas of translating a telegram into different protocols for supporting communications between the PCL with plurality of controllers with Crater-Bhatt-Wang's system in order to provide an efficient, dynamic and open network interface which support for interchangeable sets for communication and interface modules, see (Heidhues: column 1, lines 10-14; column 2, lines 45-49) (Graves: [0028])

The prior arts made of records and not relied upon are considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "System and methodology providing optimized data exchange with industrial controller": 2003/0061349; 6518980; 20010018690; 6490493; 20030023616; 20030061349; 7068675; 6412032; 6915444; 6425038; 20030051203

Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan-Dai Thi Truong whose telephone number is 571-272-7959. The examiner can normally be reached on Monday- Friday from 8:30am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob A. Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

01/06/2007

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